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## **CLAIMS**

What is claimed is:

1. A pyrimidine derivative of the formula (I)

$$\begin{array}{c|c}
Q_1 \\
 & Q_2
\end{array}$$

$$\begin{array}{c|c}
N & Q_2
\end{array}$$

$$\begin{array}{c|c}
R^1 \\
\end{array}$$
(I)

wherein

5

R<sup>1</sup> is selected from hydrogen, (1-6C)alkyl [optionally substituted by one or two substituents independently selected from halo, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, hydroxy, cyano, (1-4C)alkoxy, (1-4C)alkoxycarbonyl, carbamoyl, -NHCO(1-4C)alkyl, trifluoromethyl, phenylthio, phenoxy, pyridyl, morpholino], benzyl, 2-phenylethyl, (3-5C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent, or one phenyl substituent], N-phthalimido-(1-4C)alkyl, (3-5C)alkynyl [optionally substituted by one phenyl substituent] and (3-6C)cycloalkyl-(1-6C)alkyl;

wherein any phenyl or benzyl group in R<sup>1</sup> is optionally substituted by up to three substituents independently selected from halogeno, hydroxy, nitro, amino, (1-3C)alkylamino, di-[(1-3C)alkyl]amino, cyano, trifluoromethyl, (1-3C)alkyl [optionally substituted by 1 or 2 substituents independently selected from halogeno, cyano, amino, (1-3C)alkylamino, di-[(1-3C)alkyl]amino, hydroxy and trifluoromethyl], (3-5C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (3-5C)alkynyl, (1-3C)alkoxy, -SH, -S-(1-3C)alkyl, carboxy, (1-3C)alkoxycarbonyl; Q<sub>1</sub> and Q<sub>2</sub> are independently selected from phenyl, naphthyl, indanyl and 1,2,3,4-tetrahydronaphthyl;

and one or both of  $Q_1$  and  $Q_2$  bears on any available carbon atom one substituent of the formula (Ia) and  $Q_2$  may optionally bear on any available carbon atom further substituents of the formula (Ia)

$$(CH_2)n \longrightarrow (CH_2)m \longrightarrow Z$$

[provided that when present in Q<sub>1</sub> the substituent of formula (Ia) is not adjacent to the -NH-link];

wherein

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X is CH<sub>2</sub>, O, S, NH or NRx [wherein Rx is (1-4C)alkyl, optionally substituted by one substituent selected from halo, amino, cyano, (1-4Calkoxy or hydroxy];

Y is H or as defined for Z:

Z is OH, SH, NH<sub>2</sub>, (1-4C)alkoxy, (1-4C)alkylthio, -NH(1-4C)alkyl, -N[(1-4C)alkyl]<sub>2</sub>, -NH-(3-8C)cycloalkyl, pyrrolidin-1-yl, piperidin-1-yl, piperazin-1-yl [optionally substituted in the 4-position by (1-4C)alkyl or (1-4C)alkanoyl], morpholino or thiomorpholino;

15 n is 1, 2 or 3; m is 1, 2 or 3;

and  $Q_1$  may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent],

- 20 (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino-(1-3C)alkyl, (1-4C)alkylamino-(1-3C)alkyl, di-[(1-4C)alkyl]amino-(1-3C)alkyl, cyano-(1-4C)alkyl, (2-4C)alkanoyloxy-(1-4C)-alkyl, (1-4C)alkoxy-(1-3C)alkyl, carboxy-(1-4C)alkyl, (1-4C)alkoxycarbonyl-(1-4C)alkyl, carbamoyl-(1-4C)alkyl,
- 25 N.N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkyl, pyrrolidin-1-yl-(1-3C)alkyl, piperidin-1-yl-(1-3C)alkyl, piperazin-1-yl-(1-3C)alkyl, morpholino-(1-3C)alkyl, thiomorpholino-(1-3C)alkyl, piperazin-1-yl, morpholino, thiomorpholino, (1-4C)alkylthio, (1-4C)alkylsulphinyl, (1-4C)alkylsulphonyl, hydroxy-(2-4C)alkylsulphinyl, hydroxy-(2-4C)alkylsulphonyl, ureido (H2N-CO-NH-),

- (1-4C)alkylNH-CO-NH-. di-[(1-4C)alkyl]N-CO-NH-, (1-4C)alkylNH-CO-N[(1-4C)alkyl]-, di-[(1-4C)alkyl]N-CO-N[(1-4C)alkyl]-, carbamoyl, N-[(1-4C)alkyl]carbamoyl, N,N-di-[(1-4C)alkyl]carbamoyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino;
- and also independently, or in addition to, the above substituents, Q<sub>1</sub> may optionally bear on any available carbon atom up to two further substituents independently selected from (3-8C)cycloalkyl, phenyl-(1-4C)alkyl, phenyl-(1-4C)alkoxy, phenylthio, phenyl, naphthyl, benzoyl, benzimidazol-2-yl and a 5- or 6-membered aromatic heterocycle (linked via a ring carbon atom and containing one to three heteroatoms independently selected from oxygen, sulphur and nitrogen); wherein said naphthyl, phenyl, benzoyl, 5- or 6-membered aromatic heterocyclic substituents and the phenyl group in said phenyl-(1-4C)alkyl, phenylthio and phenyl-(1-4C)alkoxy substituents may optionally bear up to five substituents independently selected from halogeno, (1-4C)alkyl and (1-4C)alkoxy;
- and Q<sub>2</sub> may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, hydroxy, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino-(1-3C)alkyl, (1-4C)alkylamino-(1-3C)alkyl, di-[(1-4C)alkylamino-(1-3C)alkyl, di-[(1-4C)alkylamino-(1-3C)alkyl]
- 20 4C)alkyl]amino-(1-3C)alkyl, cyano-(1-4C)alkyl, (2-4C)alkanoyloxy-(1-4C)-alkyl, (1-4C)alkoxy-(1-3C)alkyl, carboxy-(1-4C)alkyl, (1-4C)alkoxycarbonyl-(1-4C)alkyl, carbamoyl-(1-4C)alkyl, N-(1-4C)alkyl, alkyl, N,N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkyl, pyrrolidin-1-yl-(1-3C)alkyl, piperidin-1-yl-(1-3C)alkyl, piperazin-1-yl-(1-3C)alkyl,
- 25 morpholino-(1-3C)alkyl, thiomorpholino-(1-3C)alkyl, piperazin-1-yl, morpholino, thiomorpholino,
  - (1-4C)alkoxy, cyano-(1-4C)alkoxy, carbamoyl-(1-4C)alkoxy,
  - N-(1-4C)alkylcarbamoyl-(1-4C)alkoxy, N,N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkoxy,
  - 2-aminoethoxy, 2-(1-4C)alkylaminoethoxy, 2-di-[(1-4C)alkyl]aminoethoxy,
- 30 (1-4C)alkoxycarbonyl-(1-4C)alkoxy, halogeno-(1-4C)alkoxy, 2-hydroxyethoxy, (2-4C)alkanoyloxy-(2-4C)alkoxy, 2-(1-4C)alkoxy, carboxy-(1-4C)alkoxy,

- (3-5C)alkenyloxy, (3-5C)alkynyloxy, (1-4C)alkylthio, (1-4C)alkylsulphinyl, (1-4C)alkylsulphonyl, hydroxy-(2-4C)alkylthio, hydroxy-(2-4C)alkylsulphinyl, hydroxy-(2-4C)alkylsulphonyl, ureido (H<sub>2</sub>N-CO-NH-), (1-4C)alkylNH-CO-NH-, di-[(1-4C)alkyl]N-CO-NH-, (1-4C)alkylNH-CO-N[(1-4C)alkyl]-, di-[(1-4C)alkyl]N-CO-5 N[(1-4C)alkyl]-, carbamoyl, N-[(1-4C)alkyl]carbamoyl, N,N-di-[(1-4C)alkyl]carbamoyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino, and also independently, or in addition to, the above optional substituents, Q2 may optionally bear on any available carbon atom up to two further substituents independently selected from (3-8C)cycloalkyl, phenyl-(1-4C)alkyl, phenyl-(1-4C)alkoxy, phenylthio, phenyl, naphthyl, 10 benzoyl, phenoxy, benzimidazol-2-yl and a 5- or 6-membered aromatic heterocycle (linked via a ring carbon atom and containing one to three heteroatoms independently selected from oxygen, sulphur and nitrogen); wherein said naphthyl, phenyl, benzoyl, 5- or 6-membered aromatic heterocyclic substituents and the phenyl group in said phenyl-(1-4C)alkyl, phenylthio, phenoxy and phenyl-(1-4C)alkoxy substituents may optionally bear up to five 15 substituents independently selected from halogeno, (1-4C)alkyl and (1-4C)alkoxy; or a pharmaceutically-acceptable salt or in-vivo-hydrolysable ester thereof.
- 2. A pyrimidine derivative of the formula (I) as claimed in claim 1, wherein R¹ is hydrogen, benzyl, (3-5C)alkynyl, (3-6C)cycloalkyl-(1-6C)alkyl, (1-4C)alkyl [optionally substituted by one or two substituents independently selected from hydroxy, amino, halo, trifluoromethyl and cyano] or (3-5C)alkenyl substituted by one to three halo groups or one phenyl substituent;

  Q₁ and Q₂ are independently selected from phenyl, naphthyl, indanyl and 1,2,3,4-tetrahydronaphthyl;
- 25 and one or both of Q<sub>1</sub> and Q<sub>2</sub> bears on any available carbon atom one substituent of the formula (Ia) and Q<sub>2</sub> may optionally bear on any available carbon atom further substituents of the formula (Ia) [provided that when present in Q<sub>1</sub> the substituent of formula (Ia) is not adjacent to the -NH- link];
- X is CH<sub>2</sub>, O, S, NH or NRx [wherein Rx is (1-4C)alkyl, optionally substituted by one substituent selected from halo, amino, cyano, (1-4Calkoxy or hydroxy];

  Y is H or as defined for Z;

Z is OH, SH, NH<sub>2</sub>, (1-4C)alkoxy, (1-4C)alkylthio, -NH(1-4C)alkyl, -N[(1-4C)alkyl]<sub>2</sub>, -NH-(3-8C)cycloalkyl, pyrrolidin-1-yl, piperidin-1-yl, piperazin-1-yl [optionally substituted in the 4-position by (1-4C)alkyl or (1-4C)alkanoyl], morpholino or thiomorpholino; n is 1, 2 or 3; m is 1, 2 or 3;

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and Q<sub>1</sub> may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl,

fluoro-(1-4C)alkyl, amino-(1-3C)alkyl, (1-4C)alkylamino-(1-3C)alkyl, di-[(1-4C)alkyl]amino-(1-3C)alkyl, cyano-(1-4C)alkyl, (2-4C)alkanoyloxy-(1-4C)-alkyl, (1-4C)alkoxy-(1-3C)alkyl, carboxy-(1-4C)alkyl, (1-4C)alkoxycarbonyl-(1-4C)alkyl, carbamoyl-(1-4C)alkyl, N-(1-4C)alkylcarbamoyl-(1-4C)alkyl,

N.N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkyl, pyrrolidin-1-yl-(1-3C)alkyl, piperidin-1-yl-

15 (1-3C)alkyl, piperazin-1-yl-(1-3C)alkyl, morpholino-(1-3C)alkyl, thiomorpholino-(1-3C)alkyl, piperazin-1-yl, morpholino, thiomorpholino, (1-4C)alkylthio,

(1-4C)alkylsulphinyl, (1-4C)alkylsulphonyl, hydroxy-(2-4C)alkylthio, hydroxy-

(2-4C)alkylsulphinyl, hydroxy-(2-4C)alkylsulphonyl, ureido (H2N-CO-NH-),

(1-4C)alkylNH-CO-NH-, di-[(1-4C)alkyl]N-CO-NH-, (1-4C)alkylNH-CO-N[(1-4C)alkyl]-,

di-[(1-4C)alkyl]N-CO-N[(1-4C)alkyl]-, carbamoyl, N-[(1-4C)alkyl]carbamoyl, N,N-di[(1-4C)alkyl]carbamoyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino,
(2-4C)alkanoylamino;

and also independently, or in addition to, the above substituents, Q<sub>1</sub> may optionally bear on any available carbon atom up to two further substituents independently selected from

25 (3-8C)cycloalkyl, phenyl-(1-4C)alkyl, phenyl-(1-4C)alkoxy, phenylthio, phenyl, naphthyl, benzoyl, benzimidazol-2-yl and a 5- or 6-membered aromatic heterocycle (linked via a ring carbon atom and containing one to three heteroatoms independently selected from oxygen, sulphur and nitrogen); wherein said naphthyl, phenyl, benzoyl, 5- or 6-membered aromatic heterocyclic substituents and the phenyl group in said phenyl-(1-4C)alkyl, phenylthio and

30 phenyl-(1-4C)alkoxy substituents may optionally bear up to five substituents independently selected from halogeno, (1-4C)alkyl and (1-4C)alkoxy;

)

and  $Q_2$  may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, hydroxy, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl,

- fluoro-(1-4C)alkyl, amino-(1-3C)alkyl, (1-4C)alkylamino-(1-3C)alkyl, di-[(1-4C)alkyl]amino-(1-3C)alkyl, cyano-(1-4C)alkyl, (2-4C)alkanoyloxy-(1-4C)-alkyl, (1-4C)alkoxy-(1-3C)alkyl, carboxy-(1-4C)alkyl, (1-4C)alkoxycarbonyl-(1-4C)alkyl, carbamoyl-(1-4C)alkyl, N-(1-4C)alkylcarbamoyl-(1-4C)alkyl,
  - N.N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkyl, pyrrolidin-1-yl-(1-3C)alkyl, piperidin-1-yl-
- 10 (1-3C)alkyl, piperazin-1-yl-(1-3C)alkyl, morpholino-(1-3C)alkyl, thiomorpholino-(1-3C)alkyl, piperazin-1-yl, morpholino, thiomorpholino, (1-4C)alkoxy, cyano-(1-4C)alkoxy, carbamoyl-(1-4C)alkoxy, N-(1-4C)alkylcarbamoyl-(1-4C)alkoxy, N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkoxy, 2-aminoethoxy, 2-(1-4C)alkylaminoethoxy,
  - N,N-di-[(1-4C)alkyl]-carbamoyl-(1-4C)alkoxy, 2-aminoethoxy, 2-(1-4C)alkylaminoethoxy, 2-di-[(1-4C)alkyl]aminoethoxy, (1-4C)alkoxycarbonyl-(1-4C)alkoxy,
- 15 halogeno-(1-4C)alkoxy, 2-hydroxyethoxy, (2-4C)alkanoyloxy-(2-4C)alkoxy, 2-(1-4C)alkoxy, carboxy-(1-4C)alkoxy, (3-5C)alkenyloxy, (3-5C)alkynyloxy, (1-4C)alkylthio, (1-4C)alkylsulphinyl, (1-4C)alkylsulphonyl, hydroxy-(2-4C)alkylthio, hydroxy-(2-4C)alkylsulphinyl, ureido (H<sub>2</sub>N-CO-NH-), (1-4C)alkylNH-CO-NH-, di-[(1-4C)alkyl]N-CO-NH-, (1-4C)alkylNH-CO-N[(1-4C)alkyl]-,
- di-[(1-4C)alkyl]N-CO-N[(1-4C)alkyl]-, carbamoyl, N-[(1-4C)alkyl]carbamoyl, N,N-di-[(1-4C)alkyl]carbamoyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino,
  - and also independently, or in addition to, the above optional substituents, Q2 may optionally bear on any available carbon atom up to two further substituents independently selected from
- 25 (3-8C)cycloalkyl, phenyl-(1-4C)alkyl, phenyl-(1-4C)alkoxy, phenylthio, phenyl, naphthyl, benzoyl, phenoxy, benzimidazol-2-yl and a 5- or 6-membered aromatic heterocycle (linked via a ring carbon atom and containing one to three heteroatoms independently selected from oxygen, sulphur and nitrogen); wherein said naphthyl, phenyl, benzoyl, 5- or 6-membered aromatic heterocyclic substituents and the phenyl group in said phenyl-(1-4C)alkyl,
- 30 phenylthio, phenoxy and phenyl-(1-4C)alkoxy substituents may optionally bear up to five substituents independently selected from halogeno, (1-4C)alkyl and (1-4C)alkoxy; or a

pharmaceutically-acceptable salt or in-vivo-hydrolysable ester thereof.

- 3. A pyrimidine derivative of the formula (I) as claimed in claim 1 or 2, wherein R<sup>1</sup> is hydrogen, benzyl, (3-5C)alkynyl, (3-6C)cycloalkyl-(1-6C)alkyl, (1-4C)alkyl [optionally substituted by one or two substituents independently selected from hydroxy, amino, halo, trifluoromethyl and cyano] or (3-5C)alkenyl substituted by one to three halo groups or one phenyl substituent;
  - $Q_1$  and  $Q_2$  are independently selected from phenyl or indanyl; and one or both of  $Q_1$  and  $Q_2$  bears on any available carbon atom one substituent of the
- 10 formula (Ia) and Q<sub>2</sub> may optionally bear on any available carbon atom further substituents of the formula (Ia) [provided that when present in Q<sub>1</sub> the substituent of formula (Ia) is not adjacent to the -NH- link];
  - X is CH<sub>2</sub>, O, S, NH or NRx [wherein Rx is (1-4C)alkyl, optionally substituted by one substituent selected from halo, amino, cyano, (1-4Calkoxy or hydroxy];
- Y is H or as defined for Z;
   Z is OH, SH, NH<sub>2</sub>, (1-4C)alkoxy, (1-4C)alkylthio, -NH(1-4C)alkyl, -N[(1-4C)alkyl]<sub>2</sub>,
   -NH-(3-8C)cycloalkyl, pyπolidin-1-yl, piperidin-1-yl, piperazin-1-yl [optionally substituted in the 4-position by (1-4C)alkyl or (1-4C)alkanoyl], morpholino or thiomorpholino;
   n is 1, 2 or 3; m is 1, 2 or 3;
- and Q<sub>1</sub> may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino;
- and Q₂ may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, hydroxy, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino,
- and also independently, or in addition to, the above optional substituents, Q<sub>2</sub> may optionally bear on any available carbon atom up to two further substituents independently selected from

phenylthio, phenyl, phenoxy and benzimidazol-2-yl; or a pharmaceutically-acceptable salt or in-vivo-hydrolysable ester thereof.

- 4. A pyrimidine derivative of the formula (I) as claimed in any of claims 1 to 3, wherein R¹ is hydrogen, benzyl, (3-5C)alkynyl, (3-6C)cycloalkyl-(1-6C)alkyl, (1-4C)alkyl [optionally substituted by one or two substituents independently selected from hydroxy, amino, halo, trifluoromethyl and cyano] or (3-5C)alkenyl substituted by one to three halo groups or one phenyl substituent;
  - Q<sub>1</sub> and Q<sub>2</sub> are independently selected from phenyl or indan-5-yl;
- and one or both of Q<sub>1</sub> and Q<sub>2</sub> bears on any available carbon atom one substituent of the formula (Ia) and Q<sub>2</sub> may optionally bear on any available carbon atom further substituents of the formula (Ia) [provided that when present in Q<sub>1</sub> the substituent of formula (Ia) is not adjacent to the -NH- link];
- X is O; Y is H or OH and Z is -NH(1-4C)alkyl, -N[(1-4C)alkyl]<sub>2</sub>, -NH-(3-8C)cycloalkyl, pyrrolidin-1-yl or piperazin-1-yl [optionally substituted in the 4-position by (1-4C)alkyl or (1-4C)alkanoyl]; n is 1 or 2 and m is 1 or 2;
  - and  $Q_1$  may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent],
- 20 (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino; and Q<sub>2</sub> may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, hydroxy, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent],
- 25 (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino, and also independently, or in addition to, the above optional substituents, Q<sub>2</sub> may optionally bear on any available carbon atom up to two further substituents independently selected from phenylthio, phenyl, phenoxy and benzimidazol-2-yl; or a pharmaceutically-acceptable salt or
- 30 in-vivo-hydrolysable ester thereof.

- 5. A pyrimidine derivative of the formula (I) as claimed in any of claims 1 to 4, wherein R<sup>1</sup> is -CH<sub>2</sub>CH=CHBr, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub> or -CH<sub>2</sub>CH=CH-phenyl;
- $Q_1$  and  $Q_2$  are independently selected from phenyl or indan-5-yl;

and one or both of Q1 and Q2 bears on any available carbon atom one substituent of the

- 5 formula (Ia) and Q<sub>2</sub> may optionally bear on any available carbon atom further substituents of the formula (Ia) [provided that when present in Q<sub>1</sub> the substituent of formula (Ia) is not adjacent to the -NH- link];
  - X is O; Y is H or OH and Z is -NH(1-4C)alkyl, -N[(1-4C)alkyl]<sub>2</sub>, -NH-(3-8C)cycloalkyl, pyrrolidin-1-yl or piperazin-1-yl [optionally substituted in the 4-position by (1-4C)alkyl or
- 10 (1-4C)alkanoyl]; n is 1 or 2 and m is 1 or 2; and Q<sub>1</sub> may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl,
- fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino; and Q<sub>2</sub> may optionally bear on any available carbon atom up to four substituents independently selected from halogeno, hydroxy, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl,
- fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino, and also independently, or in addition to, the above optional substituents, Q<sub>2</sub> may optionally bear on any available carbon atom up to two further substituents independently selected from phenylthio, phenyl, phenoxy and benzimidazol-2-yl; or a pharmaceutically-acceptable salt or in-vivo-hydrolysable ester thereof.

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- 6. A pyrimidine derivative of the formula (I) as claimed in any of claims 1 to 5, wherein R<sup>1</sup> is -CH<sub>2</sub>CH=CHBr, -CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub> or -CH<sub>2</sub>CH=CH-phenyl;
- $Q_1$  and  $Q_2$  are both phenyl;
- Q<sub>1</sub> bears on any available carbon atom one substituent of the formula (Ia) [provided that the substituent of formula (Ia) is not adjacent to the -NH- link];

X is O; Y is H or OH and Z is -NH(1-4C)alkyl, -N[(1-4C)alkyl]<sub>2</sub>, -NH-(3-8C)cycloalkyl, pyrrolidin-1-yl or piperazin-1-yl [optionally substituted in the 4-position by (1-4C)alkyl or (1-4C)alkanoyl]; n is 1 or 2 and m is 1 or 2;

and Q<sub>1</sub> may optionally bear on any available carbon atom up to four substituents

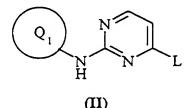
5 independently selected from halogeno, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent],

(2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino;

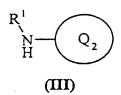
and Q2 may optionally bear on any available carbon atom up to four substituents

- independently selected from halogeno, hydroxy, thio, nitro, carboxy, cyano, (2-4C)alkenyl [optionally substituted by up to three halo substituents, or by one trifluoromethyl substituent], (2-4C)alkynyl, (1-5C)alkanoyl, (1-4C)alkoxycarbonyl, (1-6C)alkyl, hydroxy-(1-6C)alkyl, fluoro-(1-4C)alkyl, amino, (1-4C)alkylamino, di-[(1-4C)alkyl]amino, (2-4C)alkanoylamino, and also independently, or in addition to, the above optional substituents, Q<sub>2</sub> may optionally bear on any available carbon atom up to two further substituents independently selected from phenylthio, phenyl, phenoxy and benzimidazol-2-yl; or a pharmaceutically-acceptable salt or in-vivo-hydrolysable ester thereof.
- 7. A pyrimidine derivative of the formula (I) as described in claim 5 or 6, other than that 20 R<sup>1</sup> is H; or a pharmaceutically-acceptable salt or in-vivo-hydrolysable ester thereof.
  - 8. A pyrimidine derivative of the formula (I) as claimed in claim 1, being: 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2-bromo-4-methylanilino)pyrimidine;
- 25 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-
  - (2,5-dichloroanilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-
  - (3,4-dichloroanilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,4-difluoro-
- 30 (N-cyanomethyl)anilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,5-dichloro-(N-

- 2-fluoroethyl)anilino)pyrimidine;
- 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,5-dichloro-(N-propyn-2-yl)anilino)pyrimidine;
- 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,5-dichloro-
- 5 (N-cyanomethyl)anilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2-fluoro-5-methylanilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2-cyanoanilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,5-dichloro-
- 10 (N-2,2-difluoroethyl)anilino)pyrimidine;
  - 2-{4-[3-(*N*,*N*-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,5-dichloro-(N-4,4,4-trifluorobutyl)anilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2,5-dichloro-(N-3-phenylprop-2-enyl)anilino)pyrimidine;
- 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2-fluoro-5-methyl-(N-4,4,4-trifluorobutyl)anilino)pyrimidine;
  - 2-{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy]anilino}-4-(2-fluoro-5-methyl-(N-3-bromoprop-2-enyl)anilino)pyrimidine;
  - $2-\{4-[3-(N,N-Dimethyl)amino-2-hydroxy-propoxy] anilino\}-4-(2-fluoro-5-methyl-(N-3-nethyl-N-3-neth$
- 20 phenylprop-2-enyl)anilino)pyrimidine;
  or pharmaceutically-acceptable salt or in-vivo hydrolysable ester thereof.
  - 9. A process for the preparation of a compound of the formula (I) as claimed in claim 1, which comprises of a) to h):-
- 25 a) reacting a pyrimidine of formula (II):



wherein L is a displaceable group as defined below, with a compound of formula (III):



b) reaction of a pyrimidine of formula (IV):

$$\begin{array}{c|c}
L & Q_2 \\
N & Q_2 \\
N & Q_2
\end{array}$$
(IV)

wherein L is a displaceable group as defined below, with a compound of formula (V):

$$Q_1$$
 $NH_2$ 
 $(V)$ 

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c) for compounds of formula (I) wherein n is 1, 2 or 3; m = 1 and Y is OH,  $NH_2$  or SH: reaction of a 3-membered heteroalkyl ring of formula (VI):

$$(CH_2)_n$$

$$X$$

$$Q_1$$

$$M$$

$$N$$

$$Q_2$$

$$Q_1$$

$$M$$

$$R^1$$

$$(VI)$$

15 wherein A is O, S or NH;

with a nucleophile of formula (VII):

Z-D

(VII)

wherein D is H or a suitable counter-ion;

d) for compounds of formula (I) where X is oxygen: reaction of an alcohol of formula (VIII):

5 with an alcohol of formula (IX):

$$Z$$
 $(CH_2)_m$ 
 $(CH_2)_n$ 
 $OH$ 
 $(IX)$ 

e) for compounds of formula (I) wherein X is CH<sub>2</sub>, O, NH or S; Y is OH and m is 2 or 3:

10 reaction of a compound of formula (X):

$$LgO \longrightarrow (CH_2)m$$

$$(CH_2)_n$$

$$X$$

$$Q_1$$

$$N$$

$$R^1$$

$$(X)$$

- wherein -OLg is a leaving group such as mesylate or tosylate; with a nucleophile of formula Z-D (VII) wherein D is H or a suitable counter-ion;
  - f) for compounds of formula (I) wherein X is  $CH_2$ , O, NH or S; Y is H; n is 1, 2 or 3 and m is 1, 2 or 3: reaction of a compound of formula (XI):

wherein -OLg is a leaving group such as mesylate or tosylate; with a nucleophile of formula 5 Z-D (VII) wherein D is H or a suitable counter-ion;

g) for compounds of formula (I) wherein X is O, NH or S; Y is H; n is 1, 2 or 3 and m is 1, 2 or 3: reaction of a compound of formula (XII) with a compound of formula (XIII):

HX 
$$Q_1$$
  $N$   $N$   $Q_2$   $Q_2$  (XIII)

$$Z \longrightarrow (CH_2)m \longrightarrow (CH_2)_n$$

$$(XIII)$$

or

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- 15 h) for compounds of formula (I) in which Z is SH, by conversion of a thioacetate group in a corresponding compound; and thereafter if necessary:
  - i) converting a compound of the formula (I) into another compound of the formula (I);
  - ii) removing any protecting groups;
- iii) forming a pharmaceutically acceptable salt or *in vivo* hydrolysable ester; wherein L is a 20 displaceable group and D is hydrogen or a counter-ion.
  - 10. A method for producing an anti-cancer effect in a warm blooded animal which comprises administering to said animal an effective amount of a compound of the formula (I)

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as claimed in claims 1 to 8, or a pharmaceutically-acceptable salt, or in-vivo hydrolysable ester thereof.

- 11. A compound of the formula (I) as claimed in claims 1 to 8, or a pharmaceutically5 acceptable salt, or in-vivo hydrolysable ester thereof, for use as a medicament.
  - 12. The use of a compound of the formula (I) as claimed in claims 1 to 8, or a pharmaceutically-acceptable salt, or in-vivo hydrolysable ester thereof, in the manufacture of a medicament for use in the production of an anti-cancer effect in a warm blooded animal.
  - 13. A pharmaceutical composition which comprises a compound of the formula (I) as claimed in claims 1 to 8, or a pharmaceutically-acceptable salt or an in-vivo hydrolysable ester thereof, and a pharmaceutically-acceptable diluent or carrier.